

Appl. No. 10/716,885
Reply to Office Action of May 30, 2007

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REMARKS/ARGUMENTS

New Claims 21 and 22 are added. Claims 21 and 22 are in the elected group (see Claim 9 from which they differ in the specific content required in the first step). Non-elected Claims 1-8 and 20 are canceled. Claim 9 is amended and Claims 13 and 15 canceled to avoid duplication of the features now in Claim 9.

Claims 9-10 and 12 are rejected as anticipated by Hiroki et al (US 2001/0023661). Claims 9-10 and 14 are rejected as anticipated by Van Rijn et al (WO 2002/43937). These are avoided by the introduction of subject matter from non-anticipated claims. However, because these are the primary references relied on for the numerous obviousness rejections, they are discussed below in detail with respect to their teaching and lack thereof.

An important feature of the invention is that it does not require ink-jet nozzles, thereby avoiding their disadvantage

Appl. No. 10/716,885
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(e.g. see discussion in specification at end of page 2 and on page 3). The present invention substitutes control of wettability of a plate which will transfer the pattern. This way of manufacturing a display apparatus including an optical element as claimed in Claims 9, 21, and 22, is not shown or suggested in the art, alone or in combination.

Hiroki et al. (US2001/0023661), paragraphs [0188] to [0192], does not disclose the important feature of a "coating step of coating the plate with an optical material containing liquid so that a droplet of the optical material containing liquid sticks in accordance with a pattern" to be carried out by utilizing the difference in wettability between the above elements. This feature is important to attain the object of the invention and is not shown or suggested by the art.

Furthermore, Hiroki et al. does not disclose "transforming step of irradiating a light to the wettability changeable layer so as to transform the wettability of the wettability changeable layer".

Clearly, Hiroki et al. cannot anticipate the claims.

Appl. No. 10/716,885
Reply to Office Action of May 30, 2007

Furthermore, as is discussed below, no combination with the art renders the missing features obvious.

Van Rijn et al. (WO02/43937) discloses that printing is carried out by utilizing a physical formation of such engraved part 2012 and non engraved part 2015 as shown in FIG. 20B: however, it does not disclose a "transforming step of irradiating a light to the wettability changeable layer so as to transform the wettability of the wettability changeable layer". Again, the claims are clearly not anticipated by Van Rijn et al.

Furthermore, the secondary art fails to render the missing teaching obvious as explained below.

Secondary art, Kimura et al. (US2002/0075422), is combined with Hiraoki and with Rijn with respect to the obviousness of control of wettability. However, although paragraph [01901] therein, discloses water repellency and hydrophilicity of a pixel electrode 141 of a display substrate 121 and the periphery thereof, there is no disclosure of a plate which has a wettability changeable layer, for transferring a droplet to a substrate. That is, it does not disclose "transforming step of irradiating a

Appl. No. 10/716,885
Reply to Office Action of May 30, 2007

light to the wettability changeable layer so as to transform the wettability of the wettability changeable layer". Without this feature of the invention combining Kimura et al with the primary art cannot render the method obvious.

Katagami et al. (US2002/0075422), Varnazaki et al. (USP6830494) and Fujirnori et al. (US2002/0016031) all disclose an ink jet method. This teaches away from the invention method. That is, none of the above references disclose "transforming step of irradiating a light to the wettability changeable layer so as to transform the wettability of the wettability changeable layer". Rather they use ink-jets.

Also, neither Hamer et al. (US 6,413,548) nor Aoki et al. (US2002/0075422) disclose "transforming step of irradiating a light to the wettability changeable layer so as to transform the wettability of the wettability changeable layer".

Of course, the art is not cited alone but rather in combination. However, none of the cited art leads one to combine features to result in the present invention. Some even teach away from eliminating the use of ink-jet. Because they all are directed to a different idea for use of the features

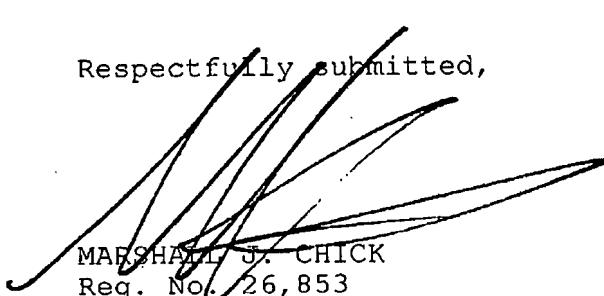
Appl. No. 10/716,885
Reply to Office Action of May 30, 2007

they show, one would not look to them to solve the problem solved by the present invention, even if they teach some of the features.

In view of the above, the rejections are avoided. Allowance of the application is therefore respectfully requested.

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